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ABSTRACT

The United States Training and Employment Service General Aptitude Test Battery (GATB), first published in 1947, has been included in a continuing program of research to validate the tests against success in many different occupations. The GATB consists of 12 tests which measure nine aptitudes: General Learning Ability; Verbal Aptitude; Numerical Aptitude; Spatial Aptitude; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, and a standard deviation of 20. Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, when combined, predict job performance. Cutting scores are set only for those aptitudes which aid in predicting the performance of the job duties of the experimental sample. The GATB norms described are appropriate only for jobs with content similar to that shown in the job description presented in this report. A description of the validation sample is included. (AG)

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TECHNICAL REPORT

ON

STANDARDIZATION OF THE GENERAL APTITUDE TEST BATTERY

FOR

WARD CLERK (medical ser.) 219.388-286

S-239

TM 001 750

U. S. Employment Service in
Cooperation with
Florida State Employment Service

April 1963

GATB #2392

STANDARDIZATION OF THE GENERAL APTITUDE TEST BATTERY

FOR

WARD CLERK (medical ser.) 219.388-286

S-239

Summary

The General Aptitude Test Battery, B-1002A. was administered to a final sample of 50 workers employed as Ward Clerk (medical ser.) 219.388 at the Jackson Memorial Hospital in Miami, Florida. The criterion consisted of supervisory ratings. On the basis of mean scores, standard deviations, job analysis data and their combined selective efficiency, Aptitudes G-Intelligence, V-Verbal Aptitude and Q-Clerical Perception were selected for inclusion in the final test norms.

GATB Norms for Ward Clerk (medical ser.) 219.388 S-239

B-1001			B-1002		
Aptitude	Tests	Minimum Acceptable Aptitude Score	Aptitude	Tests	Minimum Acceptable Aptitude Score
G	CB-1- H CB-1- I CB-1- J	85	G	Part 3 Part 4 Part 6	80
V	CB-1- J	100	V	Part 4	100
Q	CB-1- B	90	Q	Part 1	90

Effectiveness of Norms

The data in Table IV indicate that 10 of the 17 poor workers, or 59 percent of them, did not achieve the minimum scores established as cutting scores on the recommended test norms. This shows that 59 percent of the poor workers would not have been hired if the recommended test norms had been used in the selection process. Moreover, 26 of the 33 workers who made qualifying test scores, or 79 percent, were good workers.

III. Job Description

Job Title: Ward Clerk (medical ser.) 219.388-226

Job Summary: Assists head nurse by performing a variety of clerical duties such as filing, ordering supplies, compiling patient charts and keeping records. Keeps medical supply cabinet stocked and maintains perpetual inventory on all supplies and records issued to the floor. Directs doctors and visitors to rooms and patients.

Work Performed: Assists head nurse by performing majority of clerical duties. Checks charts and keeps them up-to-date by posting information from doctors' notes and nurses' summaries. Charts such information as temperature, pulse and respiration. Makes regular and periodic diet sheets from information relayed to the floor. Answers telephone and relays messages. Answers intercom. Maintains full stock of all drugs and supplies by ordering medical supplies and various forms from pharmacy and stock room. Sends transfer and discharge records to office. Reports breakage and needed building repairs.

Receives charts and medical or laboratory reports and enters information in proper records, or makes it available to doctors or nurses. Orders and picks up sterilized supplies and instrument sets each morning and returns instruments each evening. Delivers specimens to laboratory.

Meets new admissions and escorts them to their room. Delivers mail and makes telephone calls for patients. Directs doctors and visitors to rooms and patients.

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TECHNICAL REPORT

I. Purpose

This study was conducted to determine the best combination of aptitudes and minimum scores to be used as norms on the General Aptitude Test Battery for the occupation of Ward Clerk (medical ser.) 219.388.

II. Sample

The GATB, B-1002A, was administered during the period September 1959 to May 1960 to 107 women employed as Ward Clerk 219.388 at four Florida hospitals. The sample was distributed as follows:

	N
Broward General Hospital, Ft. Lauderdale, Florida	7
Mound Park Hospital, St. Petersburg, Florida	20
Tampa Municipal Hospital, Tampa, Florida	27
Jackson Memorial Hospital, Miami, Florida	53

In each case this comprised all but a small percentage of the workers available. Various problems arose in the collection of data on the Ft. Lauderdale, St. Petersburg and Tampa samples which resulted in the final sample being selected from the Jackson Memorial Hospital, Miami, Florida sample. Three workers were dropped from this sample when the criterion was corrected for experience. Therefore, the final sample is comprised of 50 females employed as Ward Clerk (medical ser.) 219.388.

TABLE I

Means (M), Standard Deviations (σ), Ranges, and Pearson Product-Moment Correlations with the Criterion Corrected for Experience (r) for Age, Education and Experience

N = 50	M	σ	Range	r
Age (years)	39.8	12.5	18-62	-.086
Education (years)	11.9	1.5	8-16	-.015
Experience (months)	33.6	30.5	3-126	-.020

IV. Experimental Battery

All the tests of the GATB, B-1002A, were administered to the sample group.

V. Criterion

The criterion data collected consisted of two sets of independent ratings made by the head nurse on USES Form SP-21, "Descriptive Rating Scale." A period of about four months elapsed between the first and second ratings. The rating scale consisted of nine items covering different aspects of job performance with five alternatives for each item. Weights of one through five indicating the degree of job proficiency attained were assigned to the alternatives. A reliability coefficient of .78 was obtained for the criterion. Therefore, the two sets of ratings were combined, resulting in a distribution of criterion scores of 46-90, with a mean of 68.7 and a standard deviation of 10.4. Since this distribution of criterion scores correlated highly (.264) with the distribution of experience data for the individuals in the sample, the final criterion was corrected for experience. In correcting the final criterion for experience, three individuals were eliminated from the sample leaving a fianl sample of 50 females employed as Ward Clerk, Hospital 1-05.01. The distribution of final criterion scores corrected for experience was 43-79, with a mean of 60.9 and a standard deviation of 9.3.

VI. Qualitative and Quantitative Analyses

A. Qualitative Analysis:

The job analysis indicated that the following aptitudes measured by the GATB appear to be important for this occupation:

Intelligence (G) - required to learn the diversified activities which are concerned with medical duties.

Verbal Aptitude (V) - required to learn technical terminology which is necessary to carry out directions and communicate with staff and patients.

Numerical Aptitude (N) - required to keep inventory of supplies and materials and order replenishments.

Clerical Perception (Q) - required to perform clerical duties, such as record keeping, posting and filing.

B. Quantitative Analysis:

TABLE II

Means (M), Standard Deviations (σ), and Pearson Product-Moment Correlations with the Criterion (r) for the Aptitudes of the GATB; N = 50

Aptitudes	M	σ	r
G-Intelligence	101.4	13.6	.137
V-Verbal Aptitude	107.1	14.1	.129
N-Numerical Aptitude	97.0	13.7	.106
S-Spatial Aptitude	97.5	18.6	.114
P-Form Perception	97.3	19.1	.161
Q-Clerical Perception	108.4	14.3	-.154
K-Motor Coordination	104.8	19.8	.102
F-Finger Dexterity	95.1	19.2	.212
M-Manual Dexterity	99.4	26.3	.019

C. Selection of Test Norms:

TABLE III

Summary of Qualitative and Quantitative Data

Type of Evidence	Aptitudes								
	G	V	N	S	P	Q	K	F	M
Job Analysis Data									
Important	X	X	X			X			
Irrelevant									
Relatively High Mean		X				X	X		
Relatively Low Sigma	X	X	X			X			
Significant Correlation with Criterion									
Aptitudes to be Considered for Trial Norms	G	V	N			Q			

Trial norms consisting of various combinations of Aptitudes G, V, N and Q with appropriate cutting scores were evaluated against the criterion by means of the Phi Coefficient technique. A comparison of the results showed that B-1002 norms consisting of G-80, V-100 and Q-90 had the best selective efficiency.

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VII. Validity of Norms (Concurrent)

The validity of the norms was determined by computing a Phi Coefficient between the test norms and the criterion and applying the Chi Square test. The criterion was dichotomized by placing 34 percent of the sample in the low criterion group because this percent was considered to be the unsatisfactory or marginal workers.

Table IV shows the relationship between test norms consisting of Aptitudes G, V and Q with critical scores of 80, 100 and 90, respectively, and the dichotomized criterion for Ward Clerk (medical ser.) 219.388. Workers in the high criterion group have been designated as "good workers" and those in the low criterion group as "poor workers."

TABLE IV

Validity of Test Norms for Ward Clerk (medical ser.) 219.388
(G-80, V-100, Q-90)

N = 50	Non-Qualifying Test Scores	Qualifying Test Scores	Total
Good Workers	7	26	33
Poor Workers	10	7	17
Total	17	33	50

Phi Coefficient = .38
χ^2 = 7.070
P/2 < .005

The data in the above table indicate a significant relationship between the test norms and the criterion for the sample.

VIII. Conclusions

On the basis of the results of this study, Aptitudes G, V and Q with minimum scores of 80, 100 and 90, respectively, have been established as B-1002 norms for Ward Clerk (medical ser.) 219.388. The equivalent B-1001 norms consist of G-85, V-100 and Q-90.

IX. Determination of Occupational Aptitude Pattern

The specific norms established for this study did not meet the requirements for incorporation into any of the existing 35 OAP's (revised 10/61). The data for this sample will be considered for future groupings of occupations in the development of new occupational aptitude patterns.